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EXAMINER	
MOORE, IAN N	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/888,915	HUH ET AL.	
	Examiner	Art Unit	
	Ian N. Moore	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/27/06*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27 and 29-40* is/are rejected.

7)☒ Claim(s) *28,41 and 42* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 3, 6,10,13,21,24,27,32,35 are objected to because of the following informalities:

Claim 3 recites "the at least **one** predetermine slot **are** the **first two slots from the last slot** and **the last slot**" in lines 1-2. It is unclear how "at least one predetermined slot" equates to three slots (i.e. first two slots from the last slot and the last slot).

Claims 6,10,13,21,24,27,32,35 are also objected for the same reason as stated above in claim 3.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1,4,8,11,15,16, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Esteves (US006205129B1).

Regarding Claims 1 and 4, Esteves discloses an access terminal (AT) (see FIG. 3, Mobile station 300) for transmitting data rate control (DRC) information (see col. 4, line 33-36; DRC message) to an access network (AN) (see FIG. 4, Base station 400) transmitting packet data for a first transmission period having a plurality of slots (see col. 4, line 1-10, 40-50; see col. 2,

line 24-26; a first interval with plurality of time slots) according to a requested data rate in order to request a data rate for packet data (see col. 4, line 45-55; a new requested data rate) to be transmitted by the AN for a second transmission period after the first transmission period (see col. 4, line 46-59; a next interval) in a mobile telecommunication system (see col. 3, line 54-56,60-64; CDMA system), comprising:

a receiver for receiving (see FIG. 3, Receiver 334,344,342,340,340; see col. 8, line 14-43) a DRC request indicator (DRI) bit (see col. 4, line 36-42; receiving a balanced state bit, set either 1 or 0) in at least one predetermined slot before a last slot of the first transmission period (see col. 4, line 37-45; in a preamble/control channel/slot is before the final/last of slot (i.e. FAC, forward activity channel)); and

a transmitter (see FIG. Transmitter 332,336,338 and 348; see col. 8, line 14-43) for selectively transmitting the DRC information according to the DRI bit to the AN (see col. 4, line 40-50; mobile station transmits DRC message according to balanced state bit).

Regarding Claims 8 and 11, Esteves discloses an access network (AN) (see FIG. 4, Base station 400) for transmitting packet data at a requested data rate to an access terminal (AT) (see FIG. 3, Mobile station 300) and controlling transmission of DRC information (see col. 4, line 33-36; DRC message) from the AT that requests the data rate for the packet data (see col. 4, line 45-55; a requested data rate) in a mobile telecommunication system (see col. 3, line 54-56,60-64; CDMA system), comprising:

a controller (see FIG. 4, Cell-site control processor 478) for checking a last slot (see col. 4, line 37-45; monitors each time slot (which includes up to a last slot) for DRC message) of a first transmission period having a plurality of slots (see col. 4, line 1-10, 40-50; see col. 2, line

24-26; a first interval with plurality of time slots) when the AN transmits the packet data to the AT for the first transmission period (see col. 4, line 30-40); and

a transmitter for transmitting (see FIG. 4, Transmit power amplifier, Transmit power control, transmit modulator 484 and diversity combiner and decoder 348) a DRC request indicator (DRI) bit (see col. 4, line 36-42; transmitting a balanced state bit, set either 1 or 0) to the AT in at least one predetermined slot before the last slot to request DRC information (see col. 4, line 37-45; in a preamble/control channel/slot is before the final/last of slot (i.e. FAC, forward activity channel)) to be used for a second transmission period after the first transmission period to the AT (see col. 4, line 46-59; for next interval).

Regarding Claim 15, Esteves discloses a mobile telecommunication system (see col. 3, line 54-56,60-64; CDMA system) comprising:

an access network (AN) (see FIG. 4, Base station 400) for transmitting packet data for a first transmission period having a plurality of slots (see col. 4, line 1-10, 40-50; see col. 2, line 24-26; a first interval with plurality of time slots) according to a requested data rate (see col. 4, line 45-55; a new requested data rate) and transmitting a DRC request indicator (DRI) bit (see FIG. 4, Transmit power amplifier, Transmit power control, transmit modulator 484); see col. 4, line 36-42; transmitting a balanced state bit, set either 1 or 0) in at least one predetermined slot before a last slot of the first transmission period (see col. 4, line 37-45; in a preamble/control channel/slot is before the final/last of slot (i.e. FAC, forward activity channel)); and

an access terminal (AT) (see FIG. 3, Mobile station 300) for selectively transmitting data rate control (DRC) information to the AN (see FIG. Transmitter 332,336,338, 348; see col. 8, line 14-43) according to the DRI bit to request a data rate for packet data (see col. 4, line 40-50;

mobile station transmits DRC message according to balanced state bit) to be received for a second transmission period after the first transmission period (see col. 4, line 46-59; for next interval).

Regarding Claim 16, Esteves discloses wherein the AT comprises the receiver (see FIG. 3, Receiver 334,344,342,340,340) for receiving the DRC bit from the AN (see col. 8, line 14-43) and a transmitter (see FIG. Transmitter 332,336,338 and 348) for selectively outputting the DRC information according to the DRl bit (see col. 8, line 14-43; col. 8, line 35-55).

Regarding Claim 18, Esteves discloses wherein the AN comprises a controller (see FIG. 4, cell-site control processor 478) for checking the last slot of the first transmission period when the AN transmits the packet data to the AT for the first transmission period (see col. 4, line 37-45; monitoring the last/final channel/slot from mobile unit), and a transmitter (see FIG. 4, Transmit power amplifier, Transmit power control, transmit modulator 484) for transmitting the DRI bit to the AT (col. 4, line 45-55).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 7,14,17,19,22,25,29,30,33,36,37 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Esteves in view of Proposed HDR Standard (hereinafter refers to as "CDMA2000 HDR standard", 3GPP2-C00-20000327)).

Regarding Claim 22, 25 and 30, Esteves discloses an access terminal (AT) (see FIG. 3, Mobile station 300) of a second group for transmitting data rate control (DRC) information (see col. 4, line 33-36; DRC message) to an access network (AN) (see FIG. 4, Base station 400) in a mobile telecommunication system (see col. 3, line 54-56,60-64; CDMA system) having the AN for transmitting packet data at a requested data rate for a first transmission period having a plurality of slots (see col. 4, line 1-10, 40-50; see col. 2, line 24-26; a first interval with plurality of time slots), and a plurality of ATs divided into a first AT group that includes at least one AT for receiving the packet data for the first transmission period (see col. 4, line 1-21; see col. 2, line 5-15; mobile stations in the first interval) and a second AT group that does not receive the packet data for the first transmission period and is to receive packet data for a second transmission period after the first transmission period (see col. 4, line 46-59; mobile stations in the next interval), comprising:

a multiplier (see FIG. 3, Diversity combiner and decoder 348) for detecting ATs of the first group by multiplying a received preamble by a plurality of predetermined codes (see col. 3, line 54-56,60-64; CDMA system mobile units) assigned to the plurality of ATs (see col. 8, line 35-55; note that each CDMA mobile unit multiples/combines received preambles with codes, during decoding);

a controller (see FIG. 4, Cell-site control processor 478) for checking a last slot of the first transmission period (see col. 4, line 37-45; monitors each time slot (which includes up to a last slot)); and

a transmitter for selectively transmitting (see FIG. 4, Transmit power amplifier, Transmit power control, transmit modulator 484, and diversity combiner and decoder 348) the DRC

information in at least one predetermined slot before the last slot to the AN under the control of the controller (see col. 4, line 37-45; in a preamble/control channel/slot is before the final/last of slot (i.e. FAC, forward activity channel)).

Esteves does not explicitly disclose orthogonal codes and a packet length detector for detecting the length of the packet data. However, these limitations are well known in the art of CDMA2000 HDR. In particular, CDMA2000 HDR standard teaches an access terminal (AT) (see FIG. 1-1, AT) comprising multiplier (see FIG. 9-7) for detecting ATs of the first group by multiplying a received preamble by a plurality of predetermined orthogonal code assigned to the plurality of ATs (see page 9-14,9-15, paragraph 9.2.1.3.1; page 9-20, paragraph 9.2.1.3.2.2.2.1; received preambles are multiplied/covered with orthogonal Walsh codes);

a packet length detector for detecting the length of the packet data transmitted to the first group of ATs for the first transmission period from the preamble (see page 8-30, paragraph 8.4.5.6.1.1; AT detecting a first n-DRCLength slots packet including preamble);

checking a last slot of the first transmission period (see page 8-8, paragraph 8.2.5.5.1.2; see page 8-30, paragraph 8.4.5.6.1.1);

selectively transmitting the DRC information in at least one of predetermined slot before the last slot to the AN (see page 8-30, paragraph 8.4.5.6.1.1 and Table 8-2), said at least one predetermined slot located after the packet data of the first transmission period (see pages 20-23, paragraphs 9.2.1.3.2.2.2.1; FIG. 9-10; DRC slot is after packet data slot; also see page 8-29, paragraph 8.4.5.4; AN utilizes a first slot and repeated for next 15 slots in slot i+32, thus, it is clear that slot 1-15 before the last slot (i.e. slot 32)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide orthogonal codes and packet length detector, as taught by CDMA2000 HDR standard in the system of Esteves, so that it would enhance to CDMA2000 family HDR which obtains very high data transmission rates and very high capacity by using a separate carrier optimized for packet data services; see CDMA2000 HDR standard, abstract and recommendation, cover page.

Regarding Claim 33, Esteves discloses an access terminal (AT) (see FIG. 3, Mobile station 300) of a second group for transmitting data rate control (DRC) information (see col. 4, line 33-36; DRC message) to an access network (AN) (see FIG. 4, Base station 400) in a mobile telecommunication system (see col. 3, line 54-56,60-64; CDMA system) having the AN for transmitting packet data at a requested data rate for a first transmission period having a plurality of slots (see col. 4, line 1-10, 40-50; see col. 2, line 24-26; a first interval with plurality of time slots), and a plurality of ATs divided into a first AT group that includes at least one AT for receiving the packet data for the first transmission period (see col. 4, line 1-21; see col. 2, line 5-15; mobile stations in the first interval) and a second AT group that does not receive the packet data for the first transmission period and is to receive packet data for a second transmission period after the first transmission period (see col. 4, line 46-59; mobile stations in the next interval), comprising:

a preamble detector (see FIG. 3, Diversity combiner and decoder 348) for detecting a preamble (see col. 3, line 54-56,60-64; CDMA system mobile units; col. 8, line 35-55; note that unit 348 in each CDMA mobile unit detects received preambles, during combining and decoding);

a controller (see FIG. 4, Cell-site control processor 478) for checking a last slot of the first transmission period (see col. 4, line 37-45; monitors each time slot (which includes up to a last slot)); and

a transmitter for selectively transmitting (see FIG. 4, Transmit power amplifier, Transmit power control, transmit modulator 484, and Diversity combiner and decoder 348) the DRC information in a predetermined slot before the last slot to the AN under the control of the controller (see col. 4, line 37-45; in a preamble/control channel/slot is before the final/last of slot (i.e. FAC, forward activity channel)).

Esteves does not explicitly disclose a packet length detector for detecting the length of the packet data. However, these limitations are well known in the art of CDMA2000 HDR. In particular, CDMA2000 HDR standard teaches an access terminal (AT) (see FIG. 1-1, AT) comprising preamble detector for detecting preambles (see FIG. 9-7; see page 9-14,9-15, paragraph 9.2.1.3.1; page 9-20, paragraph 9.2.1.3.2.2.2.1; preambles are detected);

a packet length detector for detecting the length of the packet data transmitted to the first group of ATs for the first transmission period from the preamble (see FIG. 9-7; see page 9-14,9-15, paragraph 9.2.1.3.1; page 8-30, paragraph 8.4.5.6.1.1; AT detecting a first n-DRCLength slots packet including preamble);

checking a last slot of the first transmission period (see page 8-8, paragraph 8.2.5.5.1.2; see page 8-30, paragraph 8.4.5.6.1.1);

selectively transmitting the DRC information in a predetermined slot before the last slot to the AN (see page 8-30, paragraph 8.4.5.6.1.1 and Table 8-2), said at least one predetermined slot located after the packet data of the first transmission period (see pages 20-23, paragraphs

9.2.1.3.2.2.2.1; FIG. 9-10; DRC slot is after packet data slot; also see page 8-29, paragraph 8.4.5.4; AN utilizes a first slot and repeated for next 15 slots in slot i+32, thus, it is clear that slot 1-15 before the last slot (i.e. slot 32))).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide packet length detector, as taught by CDMA2000 HDR standard in the system of Esteves, so that it would enhance to CDMA2000 family HDR which obtains very high data transmission rates and very high capacity by using a separate carrier optimized for packet data services; see CDMA2000 HDR standard, abstract and recommendation, cover page.

Regarding Claim 37, Esteves discloses an access terminal (AT) (see FIG. 3, Mobile station 300) in a mobile telecommunication system (see col. 3, line 54-56,60-64; CDMA system), comprising:

a multiplier (see FIG. 3, Diversity combiner and decoder 348) for sequentially multiplying a received preamble by a plurality of codes (see col. 3, line 54-56,60-64; CDMA system mobile units) assigned to a plurality of ATs (see col. 8, line 35-55; note that each CDMA mobile unit multiples/combines received preambles with codes, during decoding);

a detector (see FIG. 3, a combined system of control processor 346, transmit modulator 338) for detecting an AT receiving packet data from the multiplication result (see col. 8, line 35-63);

a controller (see FIG. 4, Cell-site control processor 478) for determining the termination period of packet data transmission based on the packet length (see col. 4, line 37-45; monitors each time slot or length (which includes up to a last slot) in each message); and

a transmitter for selectively transmitting (see FIG. 4, Transmit power amplifier, Transmit power control, transmit modulator 484) data rate control (DRC) information in a predetermined period to an access network (AN) (see FIG. 4, Base station 400) before the termination period (see col. 4, line 37-45; in a preamble/control channel/slot is before the final/last of slot (i.e. FAC, forward activity channel)).

Esteves does not explicitly disclose orthogonal codes and a detector for detecting the length of the packet data. However, these limitations are well known in the art of CDMA2000 HDR. In particular, CDMA2000 HDR standard teaches an access terminal (AT) (see FIG. 1-1, AT) comprising multiplier (see FIG. 9-7) for sequentially multiplying a received preamble by a plurality of predetermined orthogonal code assigned to the plurality of ATs (see page 9-14,9-15, paragraph 9.2.1.3.1; page 9-20, paragraph 9.2.1.3.2.2.2.1; received preambles are multiplied/covered with orthogonal Walsh codes);

a detector (see FIG. 9-7) for detecting an AT receiving packet data and the length of the packet data from the multiplication result (see page 8-30, paragraph 8.4.5.6.1.1; AT detecting a first n-DRCLength slots packet including preamble);

determining the termination period of packet transmission based upon packet length (see page 8-8, paragraph 8.2.5.5.1.2; see page 8-30, paragraph 8.4.5.6.1.1);

selectively transmitting the DRC information in a predetermined period to an access network (AN) (see FIG. 1-1, AN) before the termination period (see page 8-30, paragraph 8.4.5.6.1.1 and Table 8-2), said at least one predetermined slot located after the packet data of the first transmission period (see pages 20-23, paragraphs 9.2.1.3.2.2.2.1; FIG. 9-10; DRC slot is

after packet data slot; also see page 8-29, paragraph 8.4.5.4; AN utilizes a first slot and repeated for next 15 slots in slot i+32, thus, it is clear that slot 1-15 before the last slot (i.e. slot 32))).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide orthogonal codes and packet length detector, as taught by CDMA2000 HDR standard in the system of Esteves, so that it would enhance to CDMA2000 family HDR which obtains very high data transmission rates and very high capacity by using a separate carrier optimized for packet data services; see CDMA2000 HDR standard, abstract and recommendation, cover page.

Regarding Claim 40, Esteves discloses a method of transmitting a signal to an access network (AN) (see col. 3, line 54-56,60-64; CDMA system) in a plurality of access terminals (ATs) (see FIG. 3, Mobile station 300) divided into a first group (see col. 4, line 1-21; see col. 2, line 5-15; mobile stations in the first interval) and a second group (see col. 4, line 46-59; mobile stations in the next interval), for selectively transmitting data rate control (DRC) information (see col. 4, line 33-36; DRC message) to the AN in a mobile telecommunication system (see col. 3, line 54-56,60-64; CDMA system), comprising the steps of:

checking whether the ATs transmit the DRC information (see FIG. 4, Cell-site control processor 478; see col. 4, line 37-45; monitors each time slot for DRC information);

transmitting pilot signals to the AN in a predetermined first group of slots among a plurality of multiplexed slots by the first group of ATs (see col. 4, line 1-30; see col. 4, line 37-45; CDMA MSs in the first interval transmits pilots signals); and

transmitting pilot signals to the AN in a second group of slots by the second group of ATs, the second group of slots being the remaining slots from the plurality of multiplexed slots

minus the first group of slots (see col. 4, line 1-30; see col. 4, line 37-45; CDMA MSs in the next interval transmits pilots signals).

Esteves does not explicitly disclose reverse rate indicators (RRIs) if the DRC information is not transmitted. However, these limitations are well known in the art of CDMA2000 HDR. In particular, CDMA2000 HDR standard teaches transmitting reverse rate indicators (RRIs) (see FIG. 1-5, Reverse Rate Indictor in access reverse channel) and pilot signals (see FIG. 1-5, pilot) to the AN (see FIG. 1-1, AN) in a predetermined first group of slots among a plurality of multiplexed slots by the first group of ATs (see FIG. 9-7 and 9-8) if the DRC information is not transmitted (see FIG. 1-5, in access reverse channel DRC is not transmitted; see page 1-3 and 1-4, paragraph 1.4; see page 9-14,9-15, paragraph 9.2.1.3.1); and

transmitting RRIs (see FIG. 1-5, Reverse Rate Indictor in access reverse channel) and pilot signals (see FIG. 1-5, pilot) to the AN in a second group of slots by the second group of ATs if the DRC information is not transmitted (see FIG. 1-5, in access reverse channel DRC is not transmitted), the second group of slots being the remaining slots from the plurality of multiplexed slots minus the first group of slots ((see FIG. 9-7 and 9-8) see page 1-3 and 1-4, paragraph 1.4; see page 9-14,9-15, paragraph 9.2.1.3.1).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide transmitting RRI if DRC is not transmitted, as taught by CDMA2000 HDR standard in the system of Esteves, so that it would enhance to CDMA2000 family HDR which obtains very high data transmission rates and very high capacity by using a separate carrier optimized for packet data services; see CDMA2000 HDR standard, abstract and recommendation, cover page.

Regarding Claims 7,14,17,19,29, and 36, Esteves discloses the transmitter comprises a selector (see FIG. 3, a combined system of Transmit power control and Transmit modulator 338) for receiving the DRC information and selectively outputting the DRC information according to the DRl bit (see col. 5, line 20-40; see col. 8, line 35-55), and a spreader (see FIG. 3, Diversity combiner and decoder) for spreading the output of the selector with a predetermined code (see col. 8, line 35-55; note that each CDMA mobile unit multiples/combines received preambles with codes, during decoding).

Esteves does not explicitly disclose orthogonal codes. However, these limitations are well known in the art of CDMA2000 HDR. In particular, CDMA2000 HDR standard teaches an access terminal (AT) (see FIG. 1-1, AT) comprising a selector for receiving the DRC information (see FIG. 9-7, Encoder for DRC) and selectively outputting the DRC information (see page 9-14,9-15, paragraph 9.2.1.3.1) and a spreader (see FIG. 9-7, Walsh cover) for spreading the output of the selector with a predetermined orthogonal code (see page 9-14,9-15, paragraph 9.2.1.3.1; page 9-20, paragraph 9.2.1.3.2.2.2.1; received preambles are multiplied/covered with orthogonal Walsh codes);

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide orthogonal codes, as taught by CDMA2000 HDR standard in the system of Esteves, so that it would enhance to CDMA2000 family HDR which obtains very high data transmission rates and very high capacity by using a separate carrier optimized for packet data services; see CDMA2000 HDR standard, abstract and recommendation, cover page.

6. Claims 2,5,9,12,20,23,26,31,34, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wada (US 5,689,503).

Regarding Claims 2,5,9,12,20,23,26,31,34, and 38, Esteves does not explicitly disclose at least two slots before the last slot.

However, Wada teaches wherein the predetermined slot is the second slot from the last slot (see FIG. 5, base station transmission at a time slot that starts at t10 is the second slot from the last slot that starts at time 12 (i.e. final portion of a frame); see col. 7, line 4-8). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a base station transmission at a second time slot before the last time slot, as taught by Wada in the system of Esteves, so that it would allow other mobile to access in the next frame, thereby, avoiding deterioration of efficiency of the radio channel due to the collision; see Wado, see col. 55-66; see col. 7, line 6-9.

7. Claims 3,6,10,13,21,24,27,32,35 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Esteves in view of Wado, and further in view of CDMA2000 HDR standard.

Regarding Claims 3,6,10,13,21,24,27,32,35 and 39, Esteves does not explicitly disclose the first two slot from the last slot and the last slot.

However, Wada teaches wherein the predetermined slot is the first two slots from the last slot (see FIG. 5, base station transmission at two time slots that starts at t9 and t10 from the last slot that starts at time 12 (i.e. final portion of a frame); see col. 7, line 4-8). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a base station transmission at a second time slot before the last time slot, as taught by

Wada in the system of Esteves, so that it would allow other mobile to access in the next frame, thereby, avoiding deterioration of efficiency of the radio channel due to the collision; see Wado, see col. 55-66; see col. 7, line 6-9.

Neither Esteves nor Wado explicitly discloses the last slot. However, CDMA2000 HDR standard teaches wherein the predetermined slot is the last slot (see page 8-29, paragraph 8.4.5.4; see page 8-8, paragraph 832.5.5.1.2; see page8-10, paragraph 8.2.6.2; see page 8-31, paragraph 8.4.5.6.1.1; predetermined last slot/bit/channel). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the last slot, as taught by CDMA2000 HDR standard in the combined system of Esteves and Wado, so that it would enhance to CDMA2000 family HDR which obtains very high data transmission rates and very high capacity by using a separate carrier optimized for packet data services; see CDMA2000 HDR standard, abstract and recommendation, cover page.

Allowable Subject Matter

8. **Claims 28,41 and 42** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments see pages 11-12, with respect to provisional obviousness-type double patenting have been fully considered and are persuasive. The provisional obviousness-type double patenting rejections of claims 1,4,8,11,22,25,30 and 33 have been withdrawn.

10. Applicant's arguments filed 12/27/05, with respect to prior art rejection, have been fully considered but they are not persuasive.

Regarding claims 1,4,8,11,15, the applicant argued that, "...The DRI bit of claims of the present application is a bit used to request data rate control. The balanced state bit of Esteves indicates the mobile station is reliably receiving the DRC messages. Clearly, the balanced state bit cannot anticipate the DRI bit..." in page 12, paragraph 6.

In response to applicant's argument, the examiner respectfully disagrees with the above argument. First, in accordance with the applicant's specification page 8, lines 16-23 discloses, "***The DRI bit indicates whether DRC information is needed for scheduling after a predetermined slot period... The DRI bit is set to 1 if the transmission of the forward packet is terminated in the predetermined slot and to 0 if the transmission of the current forward packet continues.***"

Thus, it is clear that the applicant's DRI bit (which set 0 or 1) is used the access network (i.e. base station) to determine and indicate the reliability of the links so that Data Rate Control information can be sent accordingly.

Second, Esteves page 8, lines 16-23 discloses "*if the base station is able to reliably receive DRC messages from the mobile station on the data rate control channel, the base station sends a balanced state bit (i.e., the bit is set to 0 or 1) to the mobile station indicating that the base station is reliably receiving the DRC messages.... For every time slot, the mobile station predicts a new maximum data rate that the forward link can support during the next transmit interval and sends a quantized representation of this predicted value back to the base station as part of a DRC message.*" (see col. 4, line 33-55) Esteves also disclose "*When the system is*

operating in the variable rate mode as described above, the mobile station monitors the state of the balanced state bit periodically received from the base station. If the base station is unable to reliably receive DRC messages on the data rate control channel, then the base station will toggle the value of the next balanced state bit sent to the mobile station, thereby indicating to the mobile station that the system is in an unbalanced state such that the reverse link is unable to support transmission of the data rate information to the base station." (see col. 5, line 25-27)

Thus, it is clear that balance bit (which is set 0 or 1) is used by the base station to determine and indicate the reliably of the links so that Data Rate Control information can be sent accordingly.

In view of the above, both applicant DRI bit and Esteves's balance bit have an identical functionality as set forth above, regardless how these bits are named/called. Therefore, Esteves anticipates the applicant claimed invention.

Regarding claims 22,25,30,33 and 37, The applicant argued that, "...Esteves and proposed HDR standard, either alone or in combination, does not disclose that the DRC is transmitted after the packet data but before the end of the transmission period or the last slot..." in page 13, paragraph 1.

In response to applicant's argument, the examiner respectfully disagrees with the above argument. Proposed HDR standard discloses selectively transmitting the DRC information in a predetermined period to an access network (AN) (see FIG. 1-1, AN) before the termination period (see page 8-30, paragraph 8.4.5.6.1.1 and Table 8-2), said at least one predetermined slot located after the packet data of the first transmission period (see pages 20-23, paragraphs 9.2.1.3.2.2.2.1; FIG. 9-10; DRC slot is after packet data slot; also see page 8-29, paragraph

8.4.5.4; AN utilizes a first slot and repeated for next 15 slots in slot i+32, thus, it is clear that slot 1-15 before the last slot (i.e. slot 32))).

Regarding claim 40, The applicant argued that, "...Esteves and proposed HDR standard, either alone or in combination, does not disclose that the DRC transmission in this manner..." in page 13, paragraph 3.

In response to applicant's argument, the examiner respectfully disagrees with the above argument. The combined system of Esteves and Proposed HDR standard discloses DRC transmission in the same manner as recited in the claim 40 as set forth in above rejection.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N. Moore whose telephone number is 571-272-3085. The examiner can normally be reached on 9:00 AM- 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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